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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,444	12/03/2003	Kuldeep Karnawat	MSFT-2556 / 303212.1	7106
41505	7590	10/17/2007		
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)			EXAMINER	
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2929 ARCH STREET				
PHILADELPHIA, PA 19104-2891			ART UNIT	PAPER NUMBER
			2129	
			MAIL DATE	DELIVERY MODE
			10/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/727,444	Applicant(s) KARNAWAT ET AL.	
	Examiner Omar F. Fernández Rivas	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/1/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to an RCE filed by the Applicant filed on February 8, 2007.
2. The Office Actions of May 11, 2006 and November 1, 2006 are incorporated into this Non-Final Office Action by reference.

Status of Claims

3. Claim 1 has been amended. Claims 1-3, 5-12 and 26-29 are pending on this application.

Claim Rejections - 35 USC § 112

4. In light of the amendment of claim 1, the rejection under 35 USC 112 has been withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 9-12, 26-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebesheimer et al. in view of Fries et al. (US Patent Application #2002/0152190, referred to as **Biebesheimer**; US Patent # 6,751,606, referred to as **Fries**).

Claim 1

Biebesheimer teaches a method with regard to a user performing a search search during a single search session at a search engine by way of a search mechanism (**Biebesheimer**: abstract, L1-23; Examiner's Note (EN): a query is a search. A current user query is a single search session), said method comprising: monitoring the search mechanism for user behavior data regarding interactions between the user and the search mechanism during the search session thereat (**Biebesheimer**: abstract; page 1, par 2, L1-7; pages 3-4, par 33, L14-30; page 6, pars 49-50; page 8, pars 66-67; EN: monitoring user interactions is monitoring user behavior data. As the user works with the system (a search session), the user's interactions (behavior data) are captured and stored. Moreover, if the system receives instructions from the user (behavior data), then the system is being monitored for the user's input), the user behavior data comprising data concerning a plurality of events, each event corresponding to an action of the user at the search mechanism during the search session (**Biebesheimer**: abstract; page 1, par 2, L1-7; page 2, pars 18 and 19; pages 4-5, pars 41 and 42; page 6, pars 49-50; EN: capturing the interactions of the user as the user works with the system. Moreover, changing parameters and values of the search is an action of the user during the search); monitoring said search mechanism for response data regarding said search session, the response data comprising a results list (**Biebesheimer**: page 2, par 18; page 9, par 73; EN: the response set is a results list); determining context data describing a search during said search session, the context data being derived from the user behavior data and from the response data and

representing an overall context of the search conducted during the search session
(**Biebesheimer**: page 2, par 18; page 3, par 30; page 4, par 35; page 5, par 41, L7-17;
EN: the user's context vector of the current search); and performing a context-
dependent evaluation of the results of the search engine acquired during the search
session, the evaluation based at least in part on the determined context data and the
determined user feedback data acquired during the single search session
(**Biebesheimer**: abstract; page 2, pars 18-20; page 3, par 29, L13-26; page 4, pars 34-
37; page 5, pars. 42-44; page 6, pars 49-50; EN: increasing the relevance of the search
results using the query input and the context vector).

Biebesheimer does not teach determining user feedback data describing said
search, the user feedback data including implicit user feedback derived from the user
behavior data and explicit user feedback derived from at least one question to the user
regarding the usefulness to a user of the response data and the user response to the at
least one question.

Fries teaches determining user feedback data describing said search, the user
feedback data including implicit user feedback derived from the user behavior data and
explicit user feedback derived from at least one question to the user regarding the
usefulness to a user of the response data the user response to the at least one question
(**Fries**: abstract: L9-16; C5, L52-65; C9, L5-20; C23, L29-42; Figs 4A, 4B, 5, 6, 18 and
19; EN: if the user is asked if they found what they were looking for, then this question is
regarding the usefulness of the response to the user).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Biebesheimer by incorporating determining user feedback data describing said search, the user feedback data including implicit user feedback derived from the user behavior data and explicit user feedback derived from at least one question to the user regarding the search and the response to the question as taught by Fries for the purpose of allowing the system to modify its response based on the interactions that the user has made with the system so that future responses are more fit to the user's needs or preferences.

Claim 2

Biebesheimer teaches said search mechanism is a web browser (**Biebesheimer**: page 3, par 33, L14-17).

Claim 3

Biebesheimer teaches each action from the user at the search mechanism is selected from among entering a search query; said user navigation to a new page using a hyperlink; said user navigation to a new page using a history list; said user navigation to a new page using an address bar; said user navigation to a new page using a favorites list; user scrolling behavior; user document printing behavior; said user adding a document to said favorites list; said user switching focus to a different application; said user switching focus back from a different application; and said user closing a window (**Biebesheimer**: abstract, L1-12; page 3, par 30; page 8, par 67; Fig. 1; EN: receiving a user query).

Claim 9

Biebesheimer teaches said context data describing said search comprises user behavior data (**Biebesheimer**: abstract, L4-12; page 4, par 35, L1-9; page 5, par 41, L7-17; page 12, claim 9; user interaction data is user behavior data).

Claim 10

Biebesheimer teaches said user feedback data comprises explicit user feedback (**Biebesheimer**: page 5, par 41, L7-17; page 6, par 50; page 12, claim 7; EN: present user interaction data is explicit feedback).

Claim 11

Biebesheimer teaches said user feedback data comprises implicit user feedback based on said user behavior data (**Biebesheimer**: page 2, par 19, L3-12; page 12, claims 7 and 12; EN: history of user interaction feedback is implicit user feedback).

Claim 12

Biebesheimer teaches a computer-readable medium having computer-executable instructions to perform the method of claim 1 (**Biebesheimer**: page 13, claim 20).

Claim 26

Biebesheimer teaches the search comprises a number of queries from the user to the search engine (**Biebesheimer**: abstract, L1-12; page 3, par 30; page 8, par 67; Fig. 1; EN: receiving a user query), each query being followed by a response from the search engine (**Biebesheimer**: page 2, par 18; page 9, par 73; EN: presenting a response set), the method comprising determining context data that describes each

query of the search (**Biebesheimer**: page 2, par 18; page 3, pars 30 and 32), including timing and how the user reacted to the corresponding response (**Biebesheimer**: page 3, par 30; pages 4-5, pars 41-42; EN: the selections made by the user on the response set), and performing the context-dependent evaluation of the results of the search engine based on such context data that allows corresponding user feedback data to be analyzed in a context of the search that is performed during the search session (**Biebesheimer**: abstract, L17-26; page 2, pars 19-20; page 3, par 29, L13-24; page 4, par 37; page 5, pars. 42-44; the system is trained based on the feedback from the user. The performance of the indexing function is evaluated with the user feedback).

Claim 27

Biebesheimer teaches determining user feedback data that describes the search (**Biebesheimer**: abstract; page 2, pars 18-19), the user feedback data including implicit user feedback derived from user behavior including browsing, scrolling, and clicking behavior (**Biebesheimer**: abstract, L17-26; page 2, par 19, L15-20; page 3, par 32; EN: past user interactions are implicit feedback).

Claim 29

Biebesheimer teaches determining user feedback data that describes the search, the user feedback data including explicit user feedback by way of a dialog box opened at the search mechanism of the user (**Biebesheimer**: page 7, par 63, L6-12; EN: entering text via a web browser is done by using dialog boxes).

Response to Applicant's arguments

6. The Applicant's arguments regarding the rejection of claims 1-3, 9-12 26-27 and 29 under 35 USC 103 have been fully considered but are not persuasive.

In reference to the argument on page 8:

Specifically the combination of Biebesheimer and Fries fails to teach at least the Claim 1 element of determining user feedback data describing said search, the user feedback data including implicit user feedback derived from the user behavior data and explicit user feedback derived from at least one question to the user regarding the usefulness to a user of the response data and the user response to the at least one question in combination with the other claim elements during a single search session. Applicant respectfully requests withdrawal of the 35 U.S.C. § 103 (a) rejection of Claim 1 and it dependent claims 2-3, 9-12, 26-27, and 29.

Examiner's response

Paragraph 13 applies. As stated in the rejection above, these limitations are taught by Fries. After a search session, the user is asked if they found what they were looking for or if their search was successful (**Fries**: abstract; C23, L29-42; Figs 18 and 19). If the user indicates that they found what they were looking for, it is recorded in a registry along with previous successful results for a search and this registry is accessed each time a search query is entered (**Fries**: abstract; C23, L29-42; Fig. 18). Therefore, the data in the registry and the response of the user as to whether they found what they were looking for (a successful search) is a description of the search. The answer to the

question is considered explicit user feedback and the data in the registry of previous searches is implicit data that describe the search.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebesheimer and Fries as set forth above in view of <http://WhatIs.techtarget.com> (State Machine; referred to as **Whatis**).

Claims 5 and 17

Biebesheimer and Fries do not teach tracking, using a state machine comprising at least two states describing progress through said search, which of said states said search is in.

Whatis teaches tracking, using a state machine comprising at least two states describing progress through said search, which of said states said search is in (**Whatis**: pages 1 and 2; EN: a state machine describes the transitions (progress) from one state to another in a system based on the inputs received and outputs produced. If a state machine is used to implement a search system, the state machine will describe in which state the search is in).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the combined teachings of Biebesheimer and Fries by using a state machine to describe the state of the search as taught by Whatis for the purpose of having a mapping between the state of the search and the inputs received and the outputs produced by the system.

Claims 6 and 18

Biebesheimer teaches said context data describing said search comprises state data regarding which of said states were tracked during said search (**Biebesheimer**: abstract, L4-12; page 3, par 29, L13-24; EN: the inputs given by the user will drive the system to the next state).

Claims 7 and 19

Biebesheimer teaches least one transition between said states in said state machines is at least partially dependent on explicit user feedback (**Biebesheimer**: abstract, L4-12; page 3, par 30, L1-17; page 12, column 1, L3-8, page 12, claim 7; present user interactions or queries are explicit user feedback that will define a transition in the system).

Claims 8 and 20

Biebesheimer teaches said context data describing said search comprises said explicit user feedback (**Biebesheimer**: abstract, L4-12; page 5, par 41, L7-17; page 12, column 1, L3-8; EN: the context is associated with the query (explicit feedback)).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biebesheimer in view of Fries as set forth above in view of Hosken (US Patent #6,438,579, referred to as **Hosken**).

Claim 28

Biebesheimer teaches determining user feedback data that describes the search, the user feedback data including implicit user feedback (**Biebesheimer**: page 2, par 19, L3-12; page 12, claims 7 and 12) including: user behavior relating to the user ignoring a result item of a result list (**Biebesheimer**: page 2, par 19, L15-20; EN: if retrieving an item is viewed as successful, ignoring the items will be a failure).

Biebesheimer and Fries do not teach the implicit user feedback including user behavior while visiting a result list page, including time spent thereat; user behavior while exploring a hyperlink on the result list page, including time spent thereat; and user behavior while visiting a result item page, including the time spent thereat.

Hosken teaches the implicit user feedback including user behavior while visiting a result list page, including time spent thereat (**Hosken**: C3, L21-30; C5, L42-62); user behavior while exploring a hyperlink on the result list page, including time spent thereat (**Hosken**;; C3, L21-30; C4, L29-43; C5, L42-62; if the system uses a web browser, it

must use hyperlinks to enable a user to select an item from the list); and user behavior while visiting a result item page, including the time spent thereat (**Hosken**; C3, L21-30; C4, L29-43; C5, L42-62).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the combined teachings of Biebesheimer and Fries by incorporating teach the implicit user feedback including user behavior while visiting a result list page, including time spent thereat; user behavior while exploring a hyperlink on the result list page, including time spent thereat; and user behavior while visiting a result item page, including the time spent thereat as taught by Hosken for the purpose of measuring the interest of the user in a particular item so that the system can modify its response to present the user with similar items in future searches.

Examination Considerations

9. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 105455, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

10. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

11. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

12. Examiner's Opinion: paragraphs 10-12 apply. The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Claims 1-3, 5-12 and 26-29 are rejected.

Correspondence Information

15. Any inquires concerning this communication or earlier communications from the examiner should be directed to Omar F. Fernández Rivas, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-2589 or email omar.fernandezrivas@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, David Vincent, may be reached at (571) 272-3080.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Omar F. Fernández Rivas
Patent Examiner
Artificial Intelligence Art Unit 2129
United States Department of Commerce
Patent & Trademark Office

Friday, October 05, 2007



DAVID VINCENT
SUPERVISORY PATENT EXAMINER